

REMARKS

Claims 1 to 13 and 17 to 24 are in the application. Claims 5, 8, 10, 13, and 17 have been amended to more particularly point out and distinctly claim the invention. Support for the amendments to the claims lie in the working examples or throughout the specification, particularly on page 2, lines 16 to 20; page 6, lines 16 to 21 and lines 30 to 33; page 7, lines 1 to 7, and 16 to 23. The claims as presented clearly indicate that the invention is advantageously applied to an acidic composition which is adjusted to an effective pH and containing a viscosity modifying polymer. Claims 1, 13 and 17 has been amended to recite a positive step of addition. No new matter is believed added.

**Rejection under 35 USC §102(b)**

Claim 13 is rejected under 35 USC §102(b) as being anticipated by Heckert (US 4,722,847 (hereinafter '847)). Applicants respectfully traverse this rejection.

US 4,722,847 relates to compositions with significant levels of solubilized calcium and a process for making them. Applicants do not agree nor conclude that the Examiner is legally correct in that a preamble is non-limiting. Case law is varied on this point. However, for purposes herein, the relevant claim has been amended to recite the tooth erosion potential in the main part of the claim.

The Examiner, by maintaining the rejection is stating that the process of claim 13 is taught is anticipated by the teaching of US 4,722,847. Applicants assert that the '847 does not anticipate each and every aspect of Applicants claim 13. The '847 patent does not teach a process of reducing tooth erosion caused by acidic beverages, nor does it teach the reduction of the tooth erosion potential of an acidic beverage.

The '847 patent does not teach the control of the molar ratio of calcium to acid up to 0.8 mol per mol. The '847 does not teach addition of a viscosity modulating polymer to a composition which also teaches use of calcium to acid molar ratio control, for reduction of tooth erosion.

Therefore, in view of these remarks and amendments, reconsideration and withdrawal of the rejection to the claim 13 under 35 USC §102(b) is respectfully requested.

### **Rejection under 35 USC §103**

Claims 1 to 13 are rejected under 35 USC §103(a) as being unpatentable over WO 97/30601 in view of Heckert (US 4,722,847 ('847)).

Claims 1 to 13 are rejected under 35 USC §103(a) as being unpatentable over Parker (US 6,719,963 ('963)) in view of Heckert (US 4,722,847).

Claims 1 to 13 are rejected under 35 USC §103(a) as being unpatentable over copending Application No. 10/733,992 in view of Heckert (US 4,722,847).

Claims 17 to 24 are rejected under 35 USC §103(a) as being unpatentable over Heckert (US 4,722,847) in view of Gray (US 2,943,941 ('941)).

Applicants respectfully traverse these rejections.

Applicant's application, USSN 10/733,992 now US Patent 6,908,909 does not point out disclose the addition of a viscosity modifying polymer. It appears that the Examiner is arguing that it is obvious to add a viscosity modifying polymer to the compositions as described in USSN 10/733,992 to prevent the crystallisation of calcium which is taught in the '847 patent. It is this particular point that Applicants believe an impermissible hindsight analysis is being applied to.

USSN 10/733,992 relates to compositions and the use of calcium and acid in a specified ratio (0.3 to 0.75) with a pH in the range 3.5 to 4.5. There is no reason why a person skilled in the art would look at USSN 10/733,992 and believe that there is a problem with stabilizing calcium. With the amount calcium utilized therein, there is no problem with solubility and stability, see column 2, lines 25 to 40. The '847 patent does not teach nor suggest that compositions described therein have any positive use against tooth erosion caused by acidic beverages. Consequently, there is no motivation to combine these references and achieve the invention as claimed.

The '847 patent addresses the problem of calcium instability by utilizing calcium citrate malate. There is no reason for a person skilled in the art to consider

using a viscosity modulating polymer to stabilize calcium in the '847 patent, nor in Applicants application. Further, there is no reason why one would specifically use polyvinylpyrrolidone, (claims 18 and 19) as a stabilizer.

As previously noted, US 6,719,963 is a divisional application of US 6,319,490. Consequently, as the specifications of the 3 reference are the same the rejections will all be discussed together.

The Examiner has not reiterated the rejection, but for that the secondary references are applicable when relatively high amounts of calcium are present, thereby concluding that one would "expect solubility problems". The Examiner is correct that the primary reference does not "explicitly discuss stabilization with premix stabilizers", and goes on to states that "high calcium levels does not necessarily mean that same would not be a problem". In other words the Examiner is creating a problem in a reference which does not address such as problem, nor indicate that such a problem even exists.

The Parker et al. references relate to compositions and the use of calcium and acid in a specified ratio (0.3 to 0.75) with a pH in the range 3.5 to 4.5. Parker does not address stabilization, and as noted, specifically indicates that there is not an issue with this. Thus, the Examiner's statement is unfounded and the necessary motivation is lacking in the reference to direct the skilled artisan to add a thickening agent to stabilize a composition which is not known to need it.

The Heckert '847 patent does not teach nor suggest that the compositions disclosed therein have any positive use against tooth erosion caused by acidic beverages. In general, the calcium to acid molar ratios of the Examples in US '847 are from 0.77 to 1.72.

The present invention which is directed to the use of viscosity modifying polymers (VMP's) which VMP's has been found to reduce the tooth erosion potential of acidic compositions. The present specification teaches that it is not necessary to add a calcium compound to a formulation which has a VMP for reduction of tooth erosion. However, the specification also provides for the addition of a calcium

compound to a VMP formulation in Example 7, page 14, lines 19 to end, and on page 15, lines 1 to 4.

Thus, the primary Parker et al. references do not teach, nor suggest inclusion of a VMP to assist in reduction of the tooth erosion potential of an acidic composition. This failure is not achieved by reliance on the secondary reference of Heckert et al., '847. There is no need, nor any teaching to suggest that inhibition of the crystallization of added calcium is a problem. Therefore, the artisan would not look to the Heckert et al. patent for a solution to a problem which did not exist.

The newest rejection over the claimed subject matter is the '847 patent in view of Gray '941. Gray '941 teaches that PVP is a stabilizer for malt beverages. There is no teaching in the '941 patent that beer (as a beverage) has tooth erosion potential. As noted above, the '847 patent addresses the problem of calcium instability in a fruit juice beverage, by utilizing calcium citrate malate (CCM). CCM is a highly soluble form of calcium which is the primary focus of the '847 patent. The skilled artisan would not be motivated to look for an additional agent to stabilize a CCM containing beverage as the problem of calcium inclusion (for the purposes of calcium supplementation) has been solved. Consequently, the skilled artisan would not look to malt beverage stabilization with PVP which is to maintain "chillproofness" of the beer.

It is believed that the amendments to the claims requiring an affirmative step of controlling the pH adjustment along with addition of a VMP and a particular calcium to acid molar ratio are sufficient to distinguish the claims from the cited art.

Therefore, in view of these Remarks, reconsideration and withdrawal of the rejection to the claims under 35 USC §103 is respectfully requested.

### **Obvious Double Patenting Rejection**

The rejection to Claims 1 to 14, and 16 to 23 is maintained under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 to 20 of US Patent 6,719,963 in view of Heckert et al., US 4,722,847.

The rejection to Claims 1 to 14, and 16 to 23 is maintained under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 to 36 of US Patent 6,319,490 in view of Heckert et al., US 4,722,847.

The provisional rejection of Claims 1 to 14, and 16 to 23 is maintained under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 to 22 of USN 10/733,992 in view of Heckert et al., US 4,722,847.

As previously noted in Applicants prior response, USSN 10/733,992 has now granted as US Patent 6,908,909. Applicants respectfully traverse these rejections. In particular either the claims are obvious over the claims of the rejection or the create a double patenting rejection, but not both which is inconsistent.

As discussed above under the 35 USC §103 rejection, the Parker et al. set of patents and publications does not disclose a method of reducing tooth erosion by adding to an acidic composition a viscosity modulating polymer. While the claims herein have been amended to include addition of a calcium compound, there is no teaching or suggestion in the Parker et al. patent to direct the ordinary person in the art to include a viscosity modifying polymer to reduce tooth erosion of the acidic composition. This failure is not achieved by reliance on the secondary reference of Heckert et al., '847. There is no need, nor any teaching to suggest that inhibition of the crystallization of added calcium is a problem. Therefore, the artisan would not look to the Heckert et al. patent for a solution to a problem which did not exist.

In view of these Remarks, it is believed that the claims of the Parker et al. patents do differ significantly from the claims herein and that terminal disclaimers over the claims of the three US patents is unwarranted at this time.

Reconsideration and withdrawal of the obviousness double patenting rejection is respectfully requested.

#### CONCLUSION

Should the Examiner have any questions or wish to discuss any aspect of this case, the Examiner is encouraged to call the undersigned at the number below. It is not believed

that this paper should cause any additional fees or charges to be required, other than expressly provided for already. However, if this is not the case the Commissioner is hereby authorized to charge Deposit account 19-2570 accordingly.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Dara L. Dinner".

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